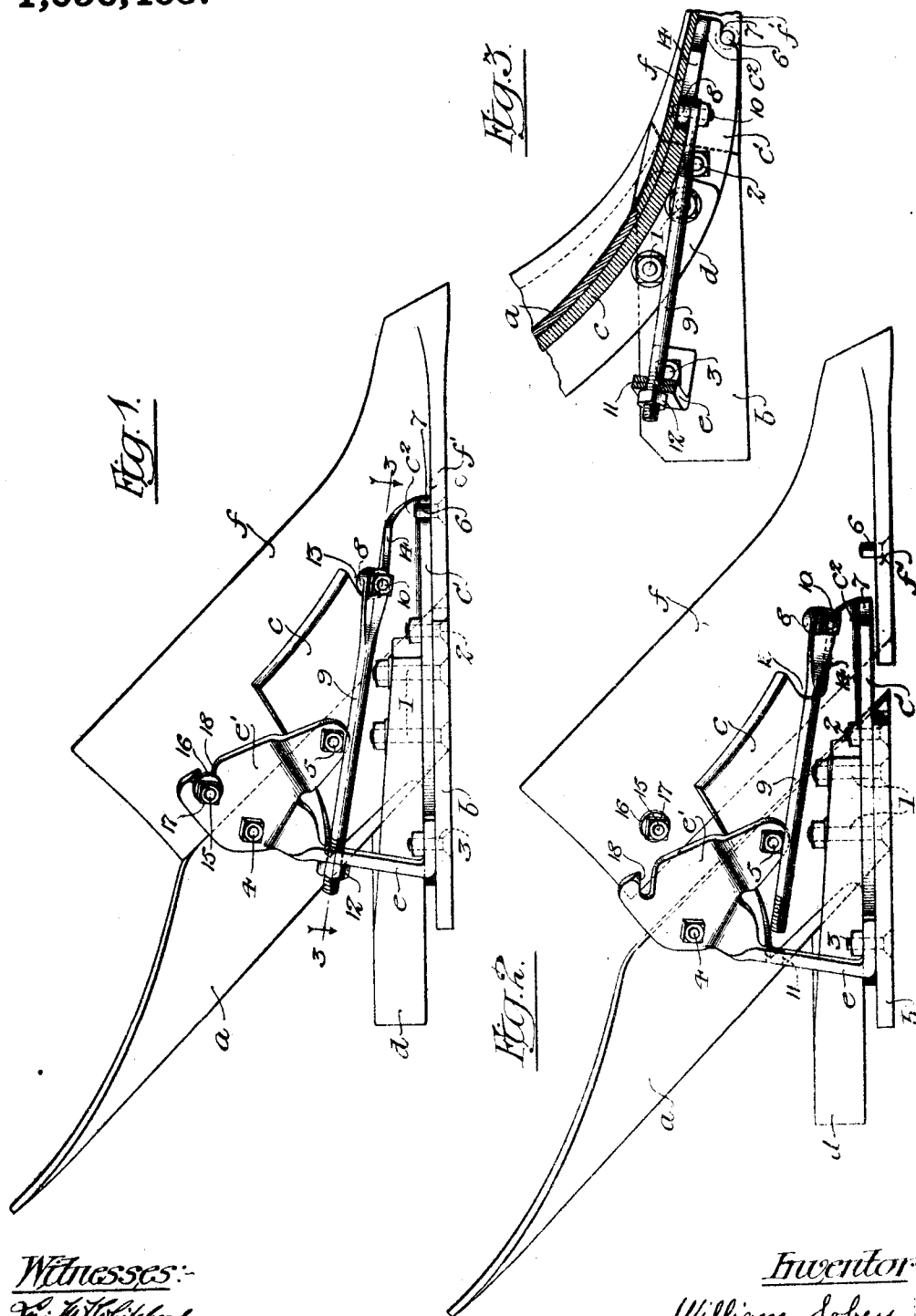


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 PLOW.
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PLOW.

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To all whom it may concern:

Be it known that I, WILLIAM SOBEY, a citizen of the United States, and a resident of Racine, county of Racine, and State of Wisconsin, have invented certain new and useful Improvements in Plows, of which the following is a full, clear, and exact description.

The invention relates to plows and more particularly to means for securing the share of the plow body in position.

A plow share, particularly in a traction plow, must be frequently removed for repairs, sharpening and the like and the present improvement seeks to provide simple and effective means which will rigidly and securely hold the share in position, but which can be readily disengaged to permit the removal of the share.

The invention consists in the features of improvement hereinafter set forth, illustrated in the preferred form in the accompanying drawings and more particularly pointed out in the appended claims.

In the drawings, which illustrate the preferred embodiment of the invention, Figure 1 is an inverted plan view of the plow body. Fig. 2 is a similar view showing the share disconnected. Fig. 3 is a detail section on the line 3—3 of Fig. 1.

The parts of the plow body, that is to say, the mold board, land side, share and the frog for connecting these parts are of usual construction, except that the share is not bolted in the ordinary fashion directly to the frog. The mold board *a* and land side bar *b* are, however, bolted in any usual or suitable manner to the faces of the angle-shaped frog *c*. The lower end of the plow beam *d* is secured to the plow body by a pair of bolts 1 which extend through the lower end of the beam, through the land side *c'* of the frog and through the land side bar *b* of the plow body. The forward end of the land side bar is also connected to the frog by a bolt 2. A bolt 3 connects the rear end of the land side bar *b* to one end of a cross brace *e*. The opposite end of the brace *e* is provided with a triangular part or plate *e'* which overlaps the mold board *a* and frog *c* and is secured thereto by bolts 4 and

5. One portion of the triangular part *e'* of the brace extends beyond the edge of the mold board and is connected to the heel of the share as hereinafter described. The frog *c* also projects beyond the mold board *a* and the land side bar *b* to support the share *f*.

The share *f* is supported upon the upper face of the frog *c* and is provided with a land side flange *f'* which engages the land side *c'* of the frog. The rear end of flange *f'* abuts against the forward end of the land side bar *b*. The flange is provided with a horizontal, inwardly projecting stud or abutment 6 which extends beneath the toe *c'* of the frog. Preferably, the forward portion of the land side *c'* of the frog is cut away to form a shoulder or seat 7 for the stud or abutment 6, as most clearly shown in Fig. 3. The stud or abutment 6 assists in preventing the vertical movement of the forward part of the share relatively to the frog. The toe portion *c'* of the frog fits snugly between the inner face of the flange *f'* of the share and an abutment 8 on the under face of the share. The abutment 8 is preferably in the form of an offset head formed upon the forward end of a fastening bolt 9, the latter being connected to the share by a bolt 10 extending through the head or abutment 8. The bolt 9 extends longitudinally and rearwardly from its point of connection with the share and its rear threaded end extends through an opening 11 in the cross brace *e* and is provided with a nut 12. By screwing up the nut 12, the share *f* is drawn rearwardly through the medium of the fastening bolt 9 to bring the parts thereof snugly into engagement with the frog, mold board and land side bar of the plow bottom.

The main body portion of the frog *c* on one side of its toe portion *c'* is cut away or notched as at 13 to form a shoulder 14 which engages the abutment or head 8. This shoulder is preferably slightly inclined in rearward direction away from the land side *c'* of the frog, so that, as the share is drawn rearwardly by the bolt 9, the shoulder 14 will have a wedging or camming action against the head or abutment 8. The flange

f' of the share is thus drawn snugly against the land side *c'* of the frog and the stud 6 on the flange forced securely into engagement with the seat or shoulder 7. The forward end of the bolt is also arranged to engage the main body of the frog, as most clearly shown in Fig. 3, and, in order that the forward end of the fastening bolt shall have a broad bearing upon the lower face of the frog, this part of the bolt is preferably flattened, as shown. With this arrangement, there will be a wedging or camming action between the frog and the forward end of the bolt, as the latter is drawn rearwardly by the nut 12, and the share is thus drawn snugly into engagement with the face of the frog and is securely held against springing away from the frog.

A bolt 15 extends through the heel portion of the share *f* and is provided on its lower end with a washer 16 and a nut 17. This bolt is arranged to engage a notch 18 formed in the outer corner of the triangular portion *e'* of the cross brace. The opposite sides of the notch 18 are substantially parallel to the inclined shoulder 14. When the share is in position, its heel is securely held in place by tightening the nut 17. The toe portion *c'* of the frog which fits snugly between the head or abutment 8 and the land side flange *f* of the share, securely holds the share against lateral movement relatively to the frog, and the engagement of the stud or abutment 6 and the forward end of the bolt 9 with the under side of the frog, preventing the vertical movement of the share.

The share may be readily removed by loosening the nut 17 on the bolt 15 and by removing the nut 12 on the fastening bolt 9. Then, by tapping on the bolt 9, the share is forced longitudinally away from the other parts of the plow bottom, as indicated in Fig. 2. It should be noted that the abutments 6 and 8 which are secured to the share are engaged with the shoulders 7 and 14 on the frog and are disengaged therefrom only by the longitudinal movement of the share relatively to the frog. In replacing the share, the parts are assembled and the share snugly drawn into engagement with the other parts of the plow bottom by tightening the nut 12. When this is done, the shoulder 14, as stated, has the wedging or camming action against the head or abutment 8 to draw the flange *f'* and stud 6 of the share snugly against the land side *c'* and the shoulder 7, while the front part of the frog has a wedging or camming action against the forward end of the bolt 9 and draws the main portion of the share snugly into engagement with the face of the frog. After the nut 12 is tightened the nut 17 on the bolt 15 is tightened to hold the heel of the share securely in place.

The improved construction serves to

rigidly hold the share in position while permitting the ready movement of the share for repairs, sharpening or the like.

It is obvious that changes may be made in the details set forth without departure from the essentials of the invention as defined in the claims.

I claim as my invention:—

1. The combination with a plow body, of a share having a land side flange, an abutment on the lower face of said share, an inwardly projecting stud on said land side flange, a frog having a projecting toe portion fitting between said flange and said abutment and extending over said stud and a longitudinally extending bolt for securing said share to the plow body, substantially as described.

2. In a plow body, a share having a land-side flange, a frog fitting between said share and flange, said share and frog having interlocking parts arranged to be engaged by the longitudinal movement of said share over said frog, and a longitudinally extending bolt connected at its forward end to said share and at its rear end to a part of the plow body, the forward end of said bolt being arranged to abut against the lower face of said frog, substantially as described.

3. In a plow body, a share having a land-side flange and an abutment on its lower face, a frog having a toe fitting between said flange and said abutment, a stud on said land side flange extending beneath said toe, and a longitudinally extending bolt for securing said share in position, substantially as described.

4. In a plow body, a share having a land-side flange and an abutment on its lower face, a frog having a toe fitting between said flange and said abutment and having an inclined shoulder arranged to engage said abutment, said land side flange having a part extending beneath said toe, and a longitudinally extending bolt connected to said share at its forward end and to a part of the plow body at its rear end, substantially as described.

5. A plow body comprising a frog, a mold-board and a land side connected to said frog, a brace bar secured to said parts, a share having a land-side flange and an abutment on its lower face, said frog having a longitudinally extending shoulder arranged to engage said abutment, and a land-side arranged to engage said flange, and a bolt extending longitudinally from said abutment and detachably connected at its rear end to said brace, said bolt being arranged to engage the lower face of said frog, substantially as described.

6. In a plow body, a share having a land-side flange, a fastening bolt having an integral offset head at its forward end se-

cured to said share, a frog having a toe fitting between said head and said flange, a laterally projecting stud on said land side flange extending beneath said toe, and a part secured to the plow body to which the rear end of said bolt is detachably connected, substantially as described.

7. In a plow body, a share having a land-side flange, a fastening bolt having an integral offset head at its forward end secured to said share, a frog having a toe fitting between said head and said flange, and a part secured to the plow to which the rear end of said bolt is detachably connected, the forward end of said bolt adjacent said head being arranged to abut against the lower face of said frog, substantially as described.

8. The combination with a plow body, of a share having a land side flange, a projecting abutment on its inner face and an inwardly projecting stud on its land side flange, a frog provided with a toe portion fitting between said flange and said share and provided with shoulders detachably engaging said abutment and said stud, a longitudinally extending bolt connected at its forward end to said share and a part secured to the plow body to which the rear end of said bolt is detachably connected, substantially as described.

9. In a plow body, an angle shaped frog having longitudinally extending shoulders on its land side and main portion at its forward end, a share having a land-side flange provided with an inwardly projecting stud engaging the land-side shoulder of said frog, a fastening bolt having an offset head at its forward end secured to said share and engaging the other of said shoulders, said head and said stud being engaged with said shoulder and disengaged therefrom by the longitudinal movement of said share, and a cross brace at the rear of the plow body to which the rear end of said bolt is connected, the forward end of said bolt being arranged to engage said frog, substantially as described.

10. In a plow body, a frog having a longitudinally extending shoulder at its toe, a share having a land-side flange and a stud on the inner face of said flange projecting inwardly beneath the toe of said frog, an abutment on the inner face of said share engaging said shoulder, a part fixed to the rear portion of the plow body, and a bolt secured at its forward end to said share, extending beneath and abutting against said frog and detachably connected at its rear end to said part, said stud and abutment being engaged with the toe of said frog and disengaged therefrom by the longitudinal movement of said share relatively to said frog, substantially as described.

11. The combination with a plow body

a share having a land side flange, an abutment on its lower face, and an inwardly projecting stud on said land side flange, a frog having a projecting toe portion fitting between said flange and said abutment and extending over said stud, said toe portion having an inclined shoulder arranged to engage said abutment, and a longitudinally extending bolt connected to said share at its forward end and to a part of the plow body at its rear end, substantially as described.

12. The combination with a plow body, of a share having a land side flange, a fastening bolt having an upwardly offset, integral head at its forward end secured to said share, a frog having a toe fitting between said head and said flange and having an inclined cam shoulder engaging said head, the rear end of said bolt being detachably connected to a part of said plow body, the forward end of said bolt adjacent said head being arranged to abut against the lower face of said frog, substantially as described.

13. The combination with a plow body, of a share having a land side flange and an abutment on its lower face, a frog having a projecting toe portion fitting between said abutment and said flange, said share having a part extending beneath said toe portion, and a longitudinally extending bolt for securing said share to the plow body, substantially as described.

14. The combination with a plow body, of a share having a land side flange and an abutment on its lower face, a frog having a projecting toe portion fitting between said abutment and said land side flange and having an inclined cam shoulder engaging said abutment, said share having a lug extending beneath said toe portion and a longitudinally extending bolt for securing said share to the plow body, substantially as described.

15. The combination with a plow body, a share having a land side flange and an abutment on its lower face, a fastening bolt connected at its forward end to said share and at its rear end to a part of the plow body, and a frog having a projecting toe portion snugly fitting between said land side flange and said abutment, and having its upper face in engagement with said share and its lower face in engagement with the forward end of said bolt, whereby said frog has a camming action on said bolt as the latter is tightened to draw said share down into engagement with the frog, substantially as described.

16. The combination with a plow body, a share having a land side flange and an abutment on its lower face, a fastening bolt connected at its forward end to said share and at its rear end to a part of the plow body, and a frog having a projecting toe

portion snugly fitting between said land side flange and said abutment, and having its upper face in engagement with said share and its lower face in engagement with the forward end of said bolt, said toe portion having an inclined shoulder for engaging said abutment and the land side flange of

said share having an inwardly projecting stud extending beneath said toe portion, substantially as described.

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Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."